

## REMARKS

The Office Action dated October 18, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1-30 have been amended to more particularly point out and distinctly claim the subject matter of the invention. Claims 31 and 32 have been added. No new matter has been added. Claims 1-32 are submitted for consideration.

Claims 9, 19 and 29 were indicated to be allowable. Applicants thank the Examiner for indicating the allowability of these claims. However, based on the arguments presented below, Applicants request that claims 9, 19 and 19 be allowed in the present form and further request allowance of all of the presently pending claims.

Claims 10, 20 and 30 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which is the invention. Claims 10, 20 and 30 have been amended to overcome this rejection. Therefore, Applicants request that this rejection be withdrawn.

Claims 1, 2, 5, 11, 12, 15, 21, 22 and 25 were rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 5,732,044 to Whited (hereinafter Whited). The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in claims 1, 2, 5, 11, 12, 15, 21, 22 and 25 and newly added claims 31 and 32.

Claim 1, upon which claims 2-10 depend, recites a method including determining from a received signal at least one variable representing statistical characteristics of a channel and determining a prefilter using at least one variable representing the statistical characteristics of the channel. The method also includes adapting sample rate of a prefilter output of the prefilter for an adaptive channel estimator.

Claim 11, upon which claims 12-20 depend, recites a prefilters arrangement including a first determination unit configured to determine, from a received signal, at least one variable representing statistical characteristics of a channel and a second determination unit configured to determine a number of prefilter taps of a prefilter using at least one variable representing the statistical characteristics of the channel. The arrangement also includes an adaptation unit configured to adapt sample rate of a prefilter output of the prefilter for an adaptive channel estimator.

Claim 21, upon which claims 22-30 depend, recites a base station including a first determination unit configured to determine from a received signal at least one variable representing statistical characteristics of the channel and a second determination unit configured to determine a number of prefilter taps of a prefilter using at least one variable representing the statistical characteristics of the channel. The base station also includes an adaptation unit configured to adapt sample rate of a prefilter output of the prefilter for a channel estimator.

As outlined below, Applicants submit that the cited reference of Whited does not teach or suggest the elements of claims 1, 2, 5, 11, 12, 15, 21, 22 and 25.

Whited discloses a method of detecting a preamble of a CPM waveform. Referring to Figure 3 of Whited, in Step 310, a CPM waveform is sampled. In Step 312, a Fast Fourier transform is performed on the waveform. In Step 314, the power spectrum of the waveform is determined from the Fast Fourier transform. In Step 316, an estimate of the signal-to-noise ratio is executed. In Step 318, the signal-to-noise ratio is compared with a threshold and a determination is made as to whether the calculated signal-to-noise ratio is less than the threshold. In Step 320, if the calculated signal-to-noise ratio is not less than the threshold, a power spectra of the waveform is accumulated. In Step 322, the symbol rate of the waveform is estimated. In Step 324, a Doppler is estimated. In Step 326, it is determined whether further accumulation of power spectra should continue. In the event no further accumulation is required, in Step 328, the sampling rate is set based on the symbol rate of step 322. In Step 330, the center frequency is tuned based on the Doppler to center the waveform spectrum. See at least Figure 3 and Col. 4, line 53-Col. 5, line 11.

Applicants submit that Whited does not teach or suggest each of the elements recited in the presently pending claims. Each of claims 1, 2, 5, 11, 12, 15, 21, 22 and 25 recites determining a prefilter using at least one variable representing the statistical characteristics of the channel and adapting sample rate of a prefilter output of the prefilter for an adaptive channel estimator. The Office Action alleged that Whited discloses these features. Specifically, the Office Action cited step 328 of Whited as teaching determining a prefilter using at least one variable representing the statistical characteristics of the channel and adapting sample rate of a prefilter output of the prefilter

for an adaptive channel estimator, as recited in the presently pending claims. However, Applicants submit that the cited section of Whited merely teaches that the sampling rate is set based on the symbol rate of step 322. There is no teaching or suggestion in the cited section of Whited of determining a prefilter using at least one variable representing the statistical characteristics of the channel and adapting sample rate of a prefilter output of the prefilter for an adaptive channel estimator, as recited in the presently pending claims. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §102(e) should be withdrawn because Whited fails to teach or suggest each feature of claims 1, 2, 5, 11, 12, 15, 21, 22 and 25.

Claims 7, 17 and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Whited, as applied to claims 1, 11 and 27 respectively. According to the Office Action, Whited discloses all of the elements of claims 7, 17 and 27 except for disclosing that the Doppler shift is measured at the prefilter input as opposed to at the prefilter output. However, the Office Action alleged that the exact location of Doppler shift measurement would have been obvious, and that it lacks criticality. The rejection is traversed as being based on a reference that neither teaches nor suggests the novel combination of features clearly recited in independent claims 1 11 and 21, upon which claims 7, 17 and 27 depend.

Each of claims 1, 11 and 21 and Whited have been discussed above. As noted above, Whited does not teach or suggest determining a prefilter using at least one variable representing the statistical characteristics of the channel and adapting sample

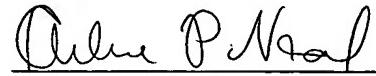
rate of a prefilter output of the prefilter for an adaptive channel estimator, as recited in claims 1, 11 and 21 upon which claims 7, 17 and 27 depend. Therefore, Applicant respectfully asserts that the rejection under 35 U.S.C. §103(a) should be withdrawn because Whited fails to teach or suggest each feature of claims 1, 11 and 21, and hence, dependent claims 7, 17 and 27.

As noted previously, claims 1-32 recite subject matter which is neither disclosed nor suggested in the prior art references cited in the Office Action. It is therefore respectfully requested that all of claims 1-32 be allowed and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



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Enclosure: Claim Fee Transmittal